

THE LEADING EDGE

PRODUCT DATA SHEET

MATERIAL SAFETY DATA SHEET

PRODUCT NAME : EG75 BLOCK OR ROD MATERIAL

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

EG75 Blocks or Rod Material

REACH Registration Number: 01-2119486977-12-0018

CAS No: 7782-42-5

EC No: 231-955-3

Relevant identified uses of the substance or mixture and uses advised against use of the substance/mixture

Processing of graphite (substance)

Milling and sieving of graphite powder.

Distribution and handling of graphite (substance)

Bulk loading and unloading, repacking, sampling and storage of synthetic graphite powder.

Formulation of mixtures

Mixing of graphite powder with additional components.

Calendering/molding operations

Compression of graphite as a substance or in preparations (production of articles).

Thermal treatment

Thermal treatment at temperatures above 500 °C, incl. charging and discharging.

Use as an article (mechanical applications)

Sealing and bearing application (in-dustrial incl. automotive).

Use as an article (high temperature applications)

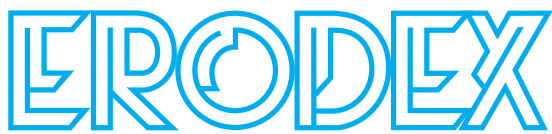
Heater, Shielding and thermal management.

Use as an article (electrical applications)

Conductivity (e.g. electrical contacts, brushes).

Use as an article (metallurgical applications)

e.g. graphite electrodes, dies for continuous casting.



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Use as substance or in preparations

e.g. use in lubricants and conductive materials.

Use as substance or in preparations

e.g. recarburiser, casting powder, ramming mass.

Uses advised against

none.

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

This substance is not classified as dangerous according to Directive 67/548/EEC.

GHS classification

This substance is not classified as dangerous according to Regulation (EC) No. 1272/2008.

Label elements

Other hazards

High slip hazard because of leaking or spilled product. Graphite dusts could cause an electrical short.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Chemical characterization

Mixture based on Graphite

EC-no. (EINECS/ELINCS): 231-955-3;

CAS-No.: 7782-42-5;

concentration: > 94 % by weight;

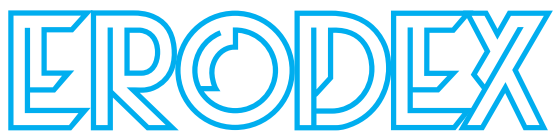
dangerous contamination: none

REACH Article 33 (SVHC): This Product contains no chemical substance, that is listed in Article 59 (1, 10) of Regulation (EC) No. 1907/2006.

Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification	
Index No	GHS classification	
REACH No		
231-955-3	graphite	> 95 %
7782-42-5		
01-2119486977-12-		

Full text of R- and H-phrases: see section 16.



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SECTION 4: FIRST AID MEASURES

Description of first aid measures

General information:	none/none
After inhalation:	Provide fresh air.
After contact with skin:	Gently wash with plenty of soap and water.
After contact with eyes:	Rinse cautiously with water for several minutes.
After ingestion:	Rinse mouth immediately and drink large quantities of water.
Most important symptoms and effects, both acute and delayed:	None
Indication of any immediate medical attention and special treatment needed:	None

SECTION 5: FIRE FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

Foam. Carbon dioxide (CO₂). Extinguishing powder. Water spray. (use only up to 1500°C)
Use inert gases or covering with cold coke or graphite powder (> 1500 °C).

Extinguishing media which must not be used for safety reasons

High power water jet.

Special hazards arising from the substance or mixture

Can be released in case of fire: Carbon dioxide (CO₂). Carbon monoxide. Sulphur dioxide (SO₂).

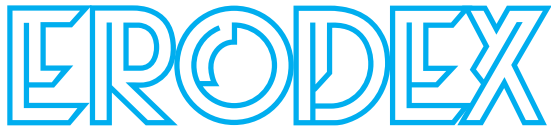
Fire class A: Solid material fires, mainly of organic nature, that normally burn with formation of embers.

Advice for fire fighters

In case of insufficient ventilation, wear suitable respiratory equipment.

Additional information

At temperature > 1500 °C graphite reacts with substances containing oxygen.



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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Additional advice on limit values

If technical suction or ventilation measures are not possible or are insufficient, protective breathing apparatus must be worn. [EN 14387]

Worker, industry and Worker, professional.

DNEL/DMEL (inhalation.) : 1,2 mg/m³

Consumer use

DNEL/DMEL (inhalation.) : 0,3 mg/m³

DNEL/DMEL (oral.) : 813 mg/kg bw/day

Remark

DNEL (inhalation) is applicable for respirable fractions of Graphite dust that can reach the alveolar regions of the lung.

Exposure controls

Occupational exposure controls

“Dust: 10 mg/m³ (inhalable); 3 mg/m³ (alveolar) [TRGS 900]”

Procedures to check the limit monitoring: [DIN EN 481].

Protective and hygiene measures

Do not eat, drink, smoke or sneeze at the workplace.

Wash hands before breaks and at the end of work.

Respiratory protection

If technical suction or ventilation measures are not possible or are insufficient, protective breathing apparatus must be worn. [EN 14387]

Hand protection

Suitable gloves type: Chromate-free leather. [EN 388] Wear cotton undermitten if possible.

Eye protection

Dust protection goggles. [EN 166]

Skin protection

none

Environmental exposure controls

none

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state:	Solid
Colour:	Grey / black
Odour:	None / none

Test method

Changes in the physical state

Melting point:	> 600 °C OECD 102
Boiling point:	Not applicable
Sublimation point:	3652-3697 °C
Softening point:	Not applicable
Flash point:	Not applicable

Flammability

Solid:	Non-flammable.
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Explosive properties

not explosive.

Lower explosion limits:	Not applicable
Upper explosion limits:	Not applicable

Auto-ignition temperature

Solid:	None / none
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Oxidizing properties

	None / none
Vapour pressure:	not applicable
Density (at 20 °C):	2,2 g/cm ³
Water solubility: (at 20 °C)	< 0,00045 g/L OECD 105 / EU A.6
Partition coefficient:	Not applicable
Viscosity / dynamic:	Not applicable
Evaporation rate:	Not applicable (inorganic substance)

Other information

Graphite dust with particles sizes from 4 to 40 µm is able to explode in a wide range of concentrations. The minimum ignition energy is > 1000 J for the finest dust. The dusts tested were classified as St1. (Denkevits A., 2003)

SECTION 10: STABILITY AND REACTIVITY

Reactivity	None
Chemical stability	No adverse effects known.
Possibility of hazardous reactions	None
Conditions to avoid	Graphite dust with particles sizes from 4 to 40 µm is able to explode in a wide range of concentrations.
The minimum ignition energy is	> 1000 J for the finest dust. The dusts tested were classified as St1. (Denkevits A., 2003)
Incompatible materials	None
Hazardous decomposition products	None
Further information	None

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects

Toxicokinetics, metabolism and distribution

Based on existing data the substance does not fulfill the criteria of CMR-substances Cat. 1 and 2 according 67/548/EEC.

Acute toxicity: Based on available data the classification criteria are not met.

Acute toxicity, oral: LD50: > 2000 mg/kg bw/day [Rat.] (OECD 423)

Acute toxicity, inhalant: LD50: (4h) > 2000 mg/m³ Air. [Rat.] (OECD 403)

Dose limit according to CLP.

CAS No	Chemical name	Exposure routes	Method	Dose	Species h
7782-42-5	graphite	Acute oral toxicity	LD50	> 2000 mg/kg	Rat.
		Acute dermal toxicity LD50		-- mg/kg	Rat.

Specific effects in experiment on an animal

STOT-SE

Based on available data the classification criteria are not met.

Acute toxicity, oral: Specific effects: none ; Affected organs: not applicable. [Rat.] (OECD 423)

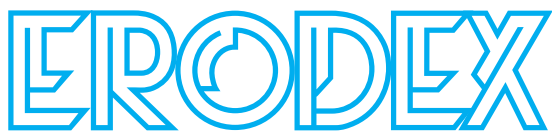
Acute toxicity, inhalant: Specific effects: Only usual signs of discomfort after the end of exposure were observed.

Irritation and corrosivity

Skin corrosion/irritation: Not an irritant. [Rabbit.] (OECD 404)

Irritant effect on the eye: Not an irritant. [Rabbit.] (OECD 405)

Respiratory or skin sensitisation: no danger of sensitization. [Mouse.] (OECD 429)



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Severe effects after repeated or prolonged exposure

STOT-RE

Based on available data the classification criteria are not met.

Subacute oral toxicity:

Specific effects: none, Affected organs: not applicable. [Rat.] (OECD 422.)

Subacute inhalative toxicity:

Specific effects: Wet lung weight was increased. Minor histopathological findings in the lung and nasal cavity. Affected organs: Irritating to respiratory system. [Rat.] (OECD 412.)

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data the classification criteria are not met.

genotoxicity:

Bacterial reverse mutation assay (OECD 471): negative.

Mammalian chromosome aberration test (OECD 473): negative.

Mammalian cell gene mutation test (gene mutation) (OECD 476): negative.

Carcinogenicity:

No indications of human carcinogenicity exist. (literature value MAK, 2001)

Reproductive toxicity:

NOAEL: > 1000 mg/kg bw/day [Rat.] (OECD 422.) Dose as nominal food intake, corresponding to limit dose acc. to OECD 422.

Additional information on tests

Aspiration hazard: Solid substance. Based on available data the classification criteria are not met.

No human data on effects after ingestion, skin or eye contact. See section 4 for first aid measures.

Empirical data on effects on humans

none

none

Further information

Result: No signs of systemic toxicity were observed, no signs of any effects on development, reproduction, or fertility.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

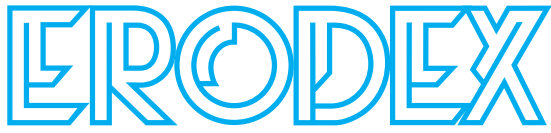
Acute fish toxicity: LC50: > 100 mg/l Exposure time: (96 h) Method: OECD 203

Acute Daphnia toxicity: EC50: > 100 mg/l Exposure time: (48 h) Method: OECD 202

Algae toxicity: EC50: > 100 mg/l Exposure time: (72 h) Method: OECD 201

Longterm fish toxicity: not determined

Chronic daphnia toxicity: not determined



T H E L E A D I N G E D G E

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CAS No	Chemical name	Method	Dose	Species	h
7782-42-5	Aquatic toxicity graphite				
	Acute fish toxicity	LC50	> 100 mg/l		96
	Acute algae toxicity	ErC50	> 100 mg/l		72
	Acute crustacea toxicity	EC50	> 100 mg/l		48

Persistence and degradability

Not determined; Product is inorganic.

Bioaccumulative potential

not determined; Product is inorganic.

Mobility in soil

not determined;

Results of PBT and vPvB assessment

This substance does not meet the criteria for classification as PBT or vPvB.

Other adverse effects

No adverse effects known.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Advice on disposal

According to EAKV, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

Contaminated packaging

According to EAKV, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

SECTION 14: TRANSPORT INFORMATION

Land transport (ADR/RID)

UN proper shipping name: Not a hazardous material with respect to these transportation regulations.

Inland waterways transport

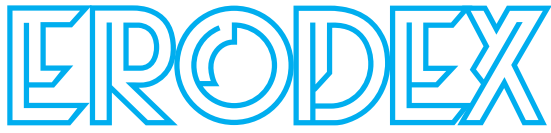
UN proper shipping name: Not a hazardous material with respect to these transportation regulations.

Marine transport

UN proper shipping name: Not a hazardous material with respect to these transportation regulations.

Air transport

UN proper shipping name: Not a hazardous material with respect to these transportation regulations.



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SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulatory information

Water contaminating class (D): - - not water contaminating

Chemical Safety Assessment

For this substance a chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

“A - Alveolengängig; ADR - Accord européen relatif au transport international des marchandises Dangereuses par Route; bw - Body Weight; CAS - Chemical Abstract Service; CSR - Chemical Safety Report; DFG Deutsche Forschungsgemeinschaft; DIN - Deutsche Industrie Norm; DNEL - Derived No Effect Level; E - Einatembar; EAKV - Europäischer Abfallkatalog Verordnung; EC – Effective Concentration; EC - Effect Concentration European Commission; EINECS - European Inventory of Existing Commercial Chemical Substances; ELINCS - European List of Notified Chemical Substances;

EN - Europäische Norm; LC - Lethal Concentration; LD - Lethal Dosis; NOAEL - No Observed Adverse Effect Level; OECD - Organization for Economic Cooperation and Development; PBT - Persistent, Bioaccumulative and Toxic; RE - Repeated Exposure; REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals;”

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.